

Astronomical Calendar; Yearbook. Variable Part; 1959

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including the variable ones, the spiral structure of the Galaxy, the Sun, the planets, comets, the Moon's atmosphere, the nature of Venus and Mars, and the meteors.

Artificial Satellites of the Earth and the Danger in Astronautics
From Meteors (V.V. Fedynskiy)

197

The author reports mainly on studies of cosmic rays, the Sun's corpuscular radiation, micrometeorites (recorded by means of ammonium-phosphate piezoelectric counters) and the annual distribution of micrometeorites and their tentative quantities.

The Mrkos Comet (1957 d) (F.Yu. Zigel')

208

This article discusses the Mrkos Comet which was discovered on August 3, 1958. The comet's parabolic orbital elements are computed and the comet photographed. Observed by several Soviet astronomers its study provided much new material.

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Astronomical Calendar; Yearbook. Variable Part; 1959
Noctilucent Clouds in 1957 (N.I. Grishin)

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214

Stereotriangulation methods for determining the height of clouds are described.

Interaction and Nature of Galaxies (B.A. Vorontsov-Vel'yaminov) 231

This article treats galactic bodies, tails, the units bridging them, and also double and multiple galaxies.

Soviet Astronomers in the United States of America (A.G. Masevich) 243

This article describes the June-July 1957 visit of a Soviet delegation of astronomers, headed by V.A. Ambartsumyan, to the United States.

The Eighth International Astronautical Congress (A.G. Masevich) 263

This article describes the Astronautical Congress held October 12, 1957 in Barcelona.

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Joint Visiting Session of the Astronomical Council of the AN
SSSR and the Academy of Sciences of the Azerbaydzhan SSR
(M.A. Klyakotko)

271

This article treats the meeting at which M.M. Aliyev,
A.A. Mikhaylov, A.A. Yakovkin, S.K. Vsekhsvyatskiy,
V.V. Sharonov, V.P. Shcheglov, Z.I. Khalilov, V.A. Krat,
and G.F. Sultanov participated.

The 350th Anniversary of the Formulation of Keppler's First
Two Laws (Yu.A. Ryabov)

275

This article is a historical account and discussion of
Keppler's first two Laws.

The 85th Anniversary of the Tashkent Astronomical Observatory
(V.P. Sheglov)

286

The article provides a detailed historical account and
description of the Tashkent Astronomical Observatory of
the Academy of Sciences of the Uzbek SSR, the oldest scien-
tific research institution in Central Asia. The Observatory

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maintains its own meteorological station, a Time Station which provides 17 time signals in 24 hours, a Solar Laboratory which conducts systematic studies of the Sun's chromospheric flares on the basis of spectroscopic and photometric observations (Yu.M. Slonim, Chief, and K.F. Kuleshova, Z.B. Korobova, and B.N. Tirnshteyn, staff members), and a network of meteorological and other research stations. Of particular interest is the Kitaba International Latitude Station imeni Ulugbek situated 3 km, from the town of Kitaba in the Kashka-Dar'inskaya oblast'. Administered by the Observatory since 1941, the Station has conducted regular observations since 1930. Its staff members include A.M. Kalmykov, Director, D.I. Kravtsev, scientist, and P.V. Shcheglov and V.S. Obrastsov, laboratory assistants. A zenith-telescope APM-2 was installed there in June 1958. In 1932 the Observatory came under the jurisdiction of the Committee on Science of the Central Executive Committee of the Uzbek SSR, since which time it has engaged in a program of research in exact time determination, solar activity, and meridian and photographic astronomy. It had been conducting regular observations of sun spots and solar protuberances since 1932. The Observatory's staff includes M.F. Bykov, who completed the work begun in 1945 of determining the direct ascension of weak stars by the absolute

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method; Kh.R. Shakirova, B.V. Yasevich, and A. Kadyrov, who made thorough studies with two passage instruments of personal and instrument errors; V.P. Shcheglov, V.T. Beda, B.Zh. Bal'zhinova, B.V. Yasevich, N.A. Omelina, L.N. Koshkina, M.G. L'vova, and G.I. Kazakov, who, in cooperation with IGY program, engaged in daily determinations of time corrections on two passage instruments and in the reception of a large number of rhythmic signals, V.A. Mal'tsev and N.N. Sytinskaya - observation of meteors; A.A. Latypov, I.M. Ishchenko, and G. Kim - regular photographic observations of the Earth's artificial satellites; F.G. Ustimenko, Chief Mechanical Engineer, and Ye.P. Kolesnikova, Head Librarian. Some of the newer equipment possessed by the Observatory include: a passage instrument APM-10, new printing chromographs; radio reception and measurement apparatus, two sets of quartz clocks obtained in 1958, a normal astrograph, a meridian circle, a zenith-telescope APM-2 set up in 1957, a solar protuberance spectroscop (obtained 1932), a standard spectrohelioscope (obtained 1935), a

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chromosphere-photosphere telescope, a celostat with a clock mechanism for spectrohelioscope, and a microphotometer MF-4. The Tashkent Astronomical Observatory (TAO) published its own Trudy, a Byulleten', and Circulars.

The 70th Anniversary of the Gor'kiy Division of the All-Union Astronomical-Geodetical Society (S.G. Kulagin)

315

Anniversary of Soviet and World Astronomy in 1959 (Yu.G. Perel') 325

The article treats briefly the Committee on Solar Research of the Academy of Sciences, USSR.

The Tenth International Astronomical Meeting in Moscow (D.Ya. Martynov)

350

Bibliography (Yu.G. Perel')

362

AVAILABLE: Library of Congress

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MM/ad
6-17-59

FELINSKIY, V. V., VESSIELOV, K. E., GALPERIN, E. I., GORYACHEV, A. V.
SOLOVYEV, O. N.

"Complex Geologica and O. N. Soloviev on Complex Geological
Geophysical Investigations of the Crustal Structure in the
Zone of Transition Between the Asiatic Continent and the
Pacific Ocean."

Paper Presented at CSAGI Meeting, 30 Jul - 9 Aug 58, Moscow
Available in Library

SOV/169-59-5-4503

Translation from: Referativnyy zhurnal, Geofizika, 1959, Nr 5, pp 33 - 34
(USSR)

AUTHOR: Fedynskiy, V.V. ✓

TITLE: The Geophysical Sea Explorations in the USSR

PERIODICAL: V sb.: XX Mezhdunar. geol. kongress. Materialy po geol. nefti.
T.I., 1958, pp 63 - 74

ABSTRACT: In the USSR, the geophysical sea explorations are carried out
by the geophysical prospecting organizations, the Institutes of
Oceanology, the Institute of Physics of the Earth AS USSR, and
the Moscow State University. The following methods of in-
vestigations are applied: magnetic, gravitational, electric,
and seismic. The geophysical investigations were performed at
the Black Sea, the Caspian Sea, the Sea of Okhotsk, the Sea of
Japan, and in the Pacific Ocean. Aeromagnetic surveys were
carried out in the regions of the Caspian Sea, the Sea of Azov,
the Aral Sea, and the Sea of Okhotsk. The variations in the
total vector of intensity of geomagnetic field ΔT were determined ✓

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The Geophysical Sea Explorations in the USSR

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with an error of $\pm 5 - 10 \gamma$. The determination of the coordinates was performed by conjunction to located stations. The total error of the survey amounted to $\sim \pm 30 \gamma$. On the chart of the magnetic anomalies of the Caspian Sea, two regional zones of magnetic maxima stand out distinctly. The northern region extends from the eastern part of the Donbas through the delta of the Volga and the northern part of the Caspian Sea to the Mugodzhary and the southern Urals. The magnetic anomalies are apparently caused by residual magnetization of the basic magma lifted from the depth up the fracture zones along the borders of the pre-Cambrian platform of the Russian plain and the Paleozoic platform of the Northern Caucasus, Ustyurt and Kara-Kumy. The same origin has also the southern zone of the magnetic maxima which extends from the northern part of the Sea of Azov along the northern foot hill of the Great Caucasus and crosses the Caspian Sea in the direction from Makhach-Kala to Krasnovodsk. This zone separates the Paleozoic platform of the Northern Caucasus, Ustyurt, and Kara-Kumy from the Tertiary geophysical zone of the Caucasus. The gravimetric investigations on sea are carried out by means of pendulums and gravimeters on board and also by ground gravimeters. The observations on board of above-water ships show understated results; but the relative distribution of the anomalies of gravity is preserved. The

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The Geophysical Sea Explorations in the USSR SOV/169-59-5-4503

pendulum observations in the Pacific Ocean show an increase of the Buge anomalies up to 200 - 300 mgal when passing over from the Sea of Okhotsk to the deep-water ocean depressions; this fact can be explained by an increase in the thickness of the crust under the Asia continent by approximately 35 km. The general gravimetric survey of the Caspian Sea presents its tectonic division into districts in satisfactory agreement with the results of aeromagnetic studies. In 1954 - 1955, in the Caspian Sea electric prospecting surveys were carried out by the method of dipole probing. The charts of conductivity obtained by the method of electric dipole-profiling, give a good representation of the behavior of the reference horizon for depths of sea down to 100 m. The seismic investigations by the method of reflected waves are successfully applied to the study of the coastal zone of the Caspian Sea down to a depth of 100 m. Intermediate magnetic registration was successfully applied for experimental investigations. Piezocrystalline receivers have been developed which improve considerably the performance of work. Investigations by means of the correlation method of refracted waves and also by the method of seismic depth-probing were carried out in 1956 for studying the regional structure of the Caspian Sea. When carrying out geophysical investigations on the open sea, the coordinates of the ships are determined by the radio-geodetic method. Bibl. 17 titles.

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A.G. Gaynanov

SOV/35-59-11-9174

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1959, Nr 11, p 78 (USSR)

AUTHOR: Fedynskiy, V.V.

TITLE: The Observation of Meteors During the International Geophysical Year (IGY) 1957-1958

PERIODICAL: Byul. Komis. po kometam i meteoram. Astron. Soveta AS USSR, 1958, Nr 2, pp 3 - 9

ABSTRACT: The first suggestion to include meteoric studies into the program of the IGY was made by the Czechoslovakian AS delegation, at the symposium called by the Commission for comets and meteors of the Astronomical Council of AS USSR in Leningrad, on the 24 May 1954. In Manchester (Jodrell Bank) Lowell proposed a fuller program at the International symposium on meteor physics. The program was seconded by Whipple and Nikole, and approved by the symposium. The program for studying meteors during the IGY in the USSR was prepared in 1954-1955 by the Commission for comets and meteors of the Astronomical Council of AS USSR, having taken into consideration the recommendations of the International

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The Observation of Meteors During the International Geophysical Year (IGY) 1957-1958

symposium. The program was adopted by the 7th Plenum of the Commission in Odessa, on 13-17 May 1957. The program provides for the study of meteor activity, the determination of drifts of the meteoric trails, and also obtaining information about the physical properties of the atmosphere from the photographs of the meteors. A table of observational points of meteors in the USSR, according to the IGY program, is cited with an explanation of the method of work, and a Calendar of the IGY is given.

Bibl. 9 titles.

L.A. Katasev

Card 2/2

FEDYNSKIY, V.V.

Aurora borealis of July 8-9, 1958, in Moscow. Astron. tsir.
no.194:29 Ag '58. (MIRA 12:12)
(Auroras)

BELOUSOV, V.V.; FREDYNSKIY, V.V.

Trip to Canada and to the United States. Sov. geol. 1 no.8:174-185
Ag '58. (MIRA 11:11)

1. Institut fiziki Zemli AN SSSR i Ministerstvo geologii i okhrany
nedr SSSR.
(Toronto--Geophysics--Congresses) (Toronto--Geodesy--Congresses)

FEDOROV, A.N. [deceased]; UL'YANOV, A.V. [deceased]; TEODOROVICH, G.I.;
USPENSKIY, V.A.; RADCHENKO, O.A.; ~~YEDINSKIY, Y.Y.~~; MAKSIMOV, M.I.;
SUBBOTINA, N.N.; STEPANOV, D.L.; MIRCHINK, Mikhail Fedorovich,
red.; IONINA, I.N., vedushchiy red.; YASHCHURZHINSKAYA, A.B.,
tekhn. red.

[Dictionary of petroleum geology] Slovar' po geologii nefi. Izd.2.,
ispr. i dop. Leningrad, Gos. nauchno-tekhn. izd-vo nefi i gorno-
toplivnoi lit-ry, Leningr. otd-nie, 1958. 776 p. (MIRA 11:10)

1. Glavnyy korrespondent Akademii nauk SSSR (for Mirchink).
(Petroleum geology--Dictionaries)

TOPCHIEV, A.V., akad., red.; TROFIMUK, A.A., red.; TREBIN, F.A., doktor tekhn. nauk, red.; FEDYNSKIY, Y.Y., doktor fiziko-matematicheskikh nauk, red.; SUKHANOV, V.P., inzh., red.; BORODULINA, K.M., ved. red.; DOBRYNINA, N.P., ved. red.; PETROVA, Ye.A., ved. red.; TROFIMOV, A.V., tekhn. red.

[The Fourth International Petroleum Congress] Rome, 1955. IV Mezhdunarodnyi neftianoi kongress. Moskva, Gos. nauchno-tekhn. izd-vo neft. i gorno-toplivnoi lit-ry. Vol. 10. [Supplements and discussions] Dopolneniia i diskussii. 1958. 475 p. (MIRA 11:11)

1. Chlen-korrespondent AN SSSR (for Trofimuk). 2. Chleny delegatsii SSSR na IV Mezhdunarodnom neftyanom kongresse (for Topchiyev, Trofimuk, Trebin, Fedynskiy, Sukhanov).
(Rome--Petroleum--Congresses)

FEDYNSKIY, V. V., GODIN, Y. N., POLSHKOV, M. K., RYABINKIN, L. A., and
FOTIADY, E. E.

"Progress of Geophysical Methods of Prospecting for Oil and Gas in
the USSR."

^{to be}
Report submitted at the Fifth World Petroleum Congress, 30 May -
5 June, 1959. New York City.

AUTHOR: Fedynskiy, V. V.

SOV/49-59-1-18/23

TITLE: On Improving of Apparatus for Gravimetric Measurements in Motion (O razrabotke apparatury dlya gravimetricheskikh izmereniy v dvizhenii)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Geofizicheskaya, 1959, Nr 1, pp 146-152 (USSR)

ABSTRACT: The aero-magnetic survey of the USSR in 1936 (Ref 1) produced important data in investigations of the structure of the Earth's crust. Since then, the new developments in this field have been aiming at methods of exact determination of magnetic anomalies ranging from a fraction of milligal (ore deposits) to several milligals (oil deposits). This means that the accuracy of measurements should be of 0.1 to 0.01 mgal. The measurements from a moving vessel (ship) are affected by the accelerations as described by the Brown formula (1) (\bar{x} , \bar{y} , \bar{z} - mean values of the horizontal and vertical accelerations of the vessel). If the measurements are

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On Improving of Apparatus for Gravimetric Measurements

introduced, which can be expressed as Eq.(2), where v - velocity of the Earth's rotation; w - aircraft velocity; R - Earth's radius. All these difficulties can be minimised when a second derivate of the potential of gravitational force is obtained by means of the vertical gradient $V_{zz} = \partial g / \partial z$. The experiments were carried out where the vertical gradient of gravitational force was determined by means of a balance (Fig.1). The Eq.(3) was found experimentally, where m - original load, Δm - load of the plate 2, necessary for $P = m \Delta g$ when the plate 1 is lowered due to an increase of $\Delta g = V_{zz} h$. Fig.2 shows a balance with the weights m_1 and m_2 placed at heights h_1 and h_2 so that $h_1 - h_2 = h$. Taking the origin of coordinates at the point of support, the coordinates of loads 1 and 2 will be expressed as Eq.(4a to g'). The moment of rotation M can be calculated as the sum of the moments $M_k + M_1 + M_2$ (beam, loads 1 and 2 respectively). The gravitational field can be considered as linear with the

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coordinates g_x and g_z obtained from the formula (7a,b). Then, by performing the calculations Eq.(5) to (10B), the Eq.(11a,b, v) is obtained. The moment $M(\alpha)$ should be introduced in order to compensate for a difference between the centre of gravity of the beam and its point of support. Then, the calculations from Eq.(12a) to (14g) should be carried out and the sensitivity ν determined in the form of Eq.(15 a, b). As an example the weight $m = 50$ g; $h = 50$ cm; $l = 20$ cm; $\tau = 10^2$ g.sec⁻²; $r = 1$ cm are given. Then, $\nu \approx 0".1$ per 1 eötvös. In order to eliminate V_x so that only V_{zz} remains, a balance made of two beams at 180° can be applied (Fig.4). Then, Eq.(12) could be considered for both beam (I and II) and the value of V_{zz} (Eq.17) found from Eqs.(16a) and (16b). The apparatus based on the above calculations would give very precise measurements from an aircraft but it would be difficult to construct. Therefore, a more practical device is suggested. Its design is based on the

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following calculations: two-spring type gravimeters are placed one above the other (Fig.5). The origin of coordinates is taken at the suspension point of the I gravimeter. Then, the distance Z between two loads will be

$$Z = h + z_2 - z_1$$

The equations of equilibrium will be Eqs.(18a) to (18g) and the sensitivity dZ calculated from Eqs.(19a) to (20b). Example: $dV_{zz} = 10^{-9} \text{ sec}^{-2}$; $h = 1 \text{ m}$;

$k = 10^2 \text{ g/sec}^{-2}$; $m = 100 \text{ g}$, then $dZ = 10^{-5} \text{ m/e8tv8s}$.

However, the value of thus calculated dZ is too small for practical considerations. It can be magnified by application of a 3-plate electric condenser, two of which are attached to one of the gravimeters (Fig.6).

The force of attraction between two plates will be $f = \frac{SV^2}{8\pi d^2}$. If the middle plate is kept in the central position at the distance ξ so that $z = z_1 + \xi$, then the force acting on it will be $F = f_1 - f_2$ (21a).

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Eq.(21b). If at a point ($\xi = 0$) a vertical gradient is V_{zz} , and its rate of increase ΔV_{zz} produces $\Delta Z = \xi$, then the astatic equations will take the form of Eqs.(22a) and (22b). Taking k being near P , the value of v can be magnified by 10 to 100 times, which gives a displacement (sensitivity) of 0.01-0.1 μ per 1 eötvös which can be measured easily by means of electric methods. Acknowledgements are made to K. Ye. Veselov, V. V. Kolyubakin, A. M. Lozinskaya, M. S. Molodenskiy and N. N. Pariyskiy for their advice. There are 6 figures and 16 references, 11 of which are Soviet, 4 English, 1 German.

ASSOCIATION: Akademiya nauk SSSR, Institut fiziki Zemli
(Ac. Sc. USSR, Institute of Earth Physics)

SUBMITTED: September 12, 1957

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3(1)

807/25-59-3-6/46

AUTHOR: Fedynskiy, V.V., Doctor of Physical and Mathematical Sciences

TITLE: The Problem of Meteoric Danger (Problema meteornoy opasnosti)

PERIODICAL: Nauka i zhizn', 1959, Nr 3, pp 17-20 and p 2 of the centerfold (USSR)

ABSTRACT: Collision with meteors is an important problem in the study of cosmic conditions for future space flights. The author explains the nature of meteoric bodies describing various methods of studying them, such as radar. Due to the thin atmosphere, the diameter of the ionized meteoric tail is considerably enlarged, enriching the ionosphere with new electrically charged particles which can easily be recorded by radar. Such observations have been successfully carried out in the Soviet Union in Kazan', Khar'kov and Tomsk. Knowing the density of meteoric matter in interplanetary space, the probability of encountering

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The Problem of Meteoric Danger

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meteors can be calculated beforehand. Observations made at Soviet stations proved that this density is subject to unexpected modifications due to constant meteoric streams. Information on meteors can also be obtained by investigating meteoric dust coming down to the earth. The 3rd Soviet sputnik, as well as the first cosmic rocket, succeeded in recording collisions with micro-meteoroids with the help of piezoelemental pick-ups converting the mechanical energy of the collision particles into electrical energy. The piezo-pick-ups of ammonium phosphate measure the impulses acting on their surface in a diapason from 0.1 to 1,000 g per cm/sec. This enables the discovery of meteoric particles with a mass of 10^{-9} g and more, at a moving speed of about 40 km/sec. However, further observations and data are necessary for establishing reliable statistics on this problem. Furthermore, an extremely high disintegration of meteoric matter has been discovered by Soviet sputniks in inter-planetary space.

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The Problem of Meteoric Danger

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Space flights will probably be possible despite of the existence of meteors. The construction of special space ships with intensified armor based on the available data on meteors could guarantee safety. There are 6 sketches, 1 drawing and 2 tables.

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3(0)

SOV/11-59-6-1/15

AUTHOR: Fedynskiy, V.V.

TITLE: Geophysical Research in Marine Geology

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geologicheskaya, 1959, Nr 6, pp 3-15 (USSR)

ABSTRACT: This is a report read by the author at the session of the Sektsiya geologii morya Okeanograficheskoy komissii AN SSSR (Section of Marine Geology of the Oceanographic Commission of the AS USSR) on May 21, 1958. The author reviews the present state and developments of geophysical research of the sea bottom, by means of magnetic, gravitational, electric and seismic survey. The aerial magnetic survey is made with AEM-49 and ASGM-25 aeromagnetometers with ferro-magnetic elements and continuous registration installed in special gondolas towed by a plane flying 500-3,000 m above the sea. Magnetic survey is also conducted from special non-magnetic vessels on which improved magnetic equipment with magneto-saturated transmitters

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was installed. At present, new nucleo-resonant magnetometers are being tested. The gravimetric survey is carried out either with pendulums - by a method developed by Weningen-Meines - and gravimeters installed on the vessels, or with immersed "bottom" gravimeters. Since 1955, a damping quartz gravimeter developed by VNIIGeofizika has been used. Its shock absorbing system eliminates the oscillation of the vessel and, when suspended on a Cardan joint, it gives very good results. Also a gravimeter developed by Graf (Western Germany) is widely used. For a detailed gravimetric survey in the shallow zone of the sea, the VNIIGeofizika developed several "bottom" gravimeters which are placed on the sea bottom in a Cardigan joint, remote controlled, and with the findings read aboard the vessel. The depth limit is around 100 m. Marine electric survey by the method of profiling is also carried out with differential sound and, since 1954, by the method of dipole sounding. A powerful generator installed aboard one vessel feeds the direct current to one dipole, the distance between

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the electrodes being 500 m; the second vessel with the oscillographic registration installation is connected with the receiving dipole. The theoretical curves of the dipole electric sounding show that it is possible to survey the sea bottom up to 200 m below sea level (Fig 2). This method also completes the results of the seismic survey indicating the lithologic compositions of under-sea beds. The seismic survey by the method of reflected waves is important for the study of the folding character of sedimentated beds and for prospecting hidden anticlinal structures where gas and oil often accumulate. In this method, the seismograph, connected with the survey vessel and sealed hermetically, is suspended above the sea bottom. The reverberation disturbances caused by the explosions were partly eliminated by special filters installed in seismic amplifiers, or by the grouping of seismographs. Such grouping is made possible by the introduction of new piezoelectric crystal receivers of small dimensions. A whole series of them can be placed in a plastic

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vinyl chloride bag filled with oil. This bag is then towed by the vessel with the seismic installation and registers the explosions while the vessel is still moving. The Institut fiziki zemli AN SSSR (Institute of Physics of the Earth of the AS USSR) developed a correlational method of reflected waves and a method of deep seismic sounding (the GSZ method) for the study of occurrence of the deep crystalline foundation and of deep beds in the terrestrial crust. The experience showed that the GSZ method gave the best results with a displaceable explosion point; the seismic oscillations being registered by single receivers aboard several vessels placed along the seismic profile. The author recommends the use of sounding devices for auxiliary regional geophysical surveying operations, especially at greater depths. There is 1 map, 1 graph, 5 profiles and 28 Soviet references.

ASSOCIATION: Vsesoyuznyy n.-i. institut geofizicheskikh metodov razvedki Ministerstva geologii i okhrany nedr SSSR, Moskva (The All-Union Scientific-Research Institute

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of Geophysical Survey Methods of the Ministry
of Geology and Conservation of Mineral Resources of
the USSR, Moscow)

SUBMITTED: September 25, 1958

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FEDYNSKIY, V.V.

Future development of geophysical methods of prospecting for
mineral deposits in the U.S.S.R. in 1959-1965. Sov. geol. 2 no.8:
3-14 Ag '59. (MIRA 13:2)

1.Ministerstvo geologii i okhrany nedr SSSR (MG i ON).
(Prospecting--Geophysical methods)

3(1)

AUTHORS: Stanyukovich, K.P., Fedynskiy, V.V. SOV/33-36-2-26/27

TITLE: Review of the Book I. Yevgen'yev, L. Kuznetsova "After the Firestone" (Editor S. Prokhodtseva) M., Geografiz, 1958, pp 214, Edition 50 000

PERIODICAL: Astronomicheskiy zhurnal, 1959, Vol 36, Nr 2, pp 380-381 (USSR)

ABSTRACT: The book deals with the history of the investigation of the gigantic meteorite which fell on June 30, 1908 into the basin of the river Podkamennaya Tunguska. The reviewers stress highly the dispassionate scientific description of the circumstances, especially the faithful report on the efforts of the Soviet scientist L.A. Kulik (follower of V.I. Vernadskiy).

SUBMITTED: January 20, 1959

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3(1).

AUTHORS: Fedynskiy, V.V., and Krinov, Ye.L.

SOV/33-36-3-28/29

TITLE: Review of Astapovich, I.S. "Meteor Phenomena in the Terrestrial Atmosphere", Moscow, 1958

PERIODICAL: Astronomicheskii zhurnal, 1959, Vol 36, Nr 3, pp 555-556 (USSR)

ABSTRACT: The book gives a good survey on the treated question and contains a series of results of the author unpublished until now. Part I: Historical development of the theory on meteors; part II: Survey of the methods; part III: Principal properties of the meteors - number, orbits, extents, brightness; part IV: Interaction of meteors with the terrestrial atmosphere; part V: Matter of meteors in the terrestrial atmosphere and on the surface of the earth. The book contains 35 chapters. In spite of some defects (occasional exaggerations and superficialities) the book is recommended. V.A. Bronshten was the editor of the book.

SUBMITTED: March 23, 1959

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MIKHAYLOV, A.A., otv.red.; MARTYNOV, D.Ya., doktor fiz.-mat.nauk, zam.otv.
red.; DURNEV, A.I., doktor tekhn.nauk, red.; SOLOV'YEV, M.D.,
doktor tekhn.nauk, red.; POPOV, P.I., prof., red.; PARENAGO, P.P.,
red. [deceased]; FEDYNSKIY, V.V., doktor fiz.-matem.nauk, red.;
BAZYKIN, V.V., red.; BRONSHTEIN, V.A., red.; SAMSONENKO, L.V.,
red.izd-vs; LEBEDEVA, L.A., tekhn.red.

[Proceedings of the Second Congress of the All-Union Astronomical
Geodetic Society] Trudy Vtorogo s"ezda Vsesoyuznogo astronomo-
geodezicheskogo obshchestva. Moskva, Izd-vo Akad.nauk SSSR, 1960.
151 p. (MIRA 14:2)

1. S"yezd Vsesoyuznogo astronomo-geodezicheskogo obshchestva. 2d,
Leningrad, 1955. 2. Chleny-korrespondenty AN SSSR (for Mikhaylov,
Parenago). (Astronomy, Spherical and practical--Congresses)
(Geodesy--Congresses)

FEDYNSKIY, V. V.

FRASE I BOOK EXPLORATION 207/2174

Pravda, Moscow.
Viktor Bogatitsky hominidically koradl', materialy, opublikovaniye
v gazete Pravda (The Second Soviet Cosmic Ship) Materials
Published in the Newspaper "Pravda", Moscow, 1960. 198 p.
50,000 copies printed.

Resp. for this Publication: V. Neut and V. Salinov; Tech. Ed.:
V. Izopodina.

PREFACE: This book is intended for the general reader.

COVERAGE: The book is a compilation of articles which appeared
in the newspaper Pravda after the launching, orbiting, and re-
covery of the capsule of the Soviet 1,600 kg spaceship on
August 19, 1960. The articles give some details of scientific
research undertaken in this flight in the fields of scientific
physiology, genetics, cosmic radiation, solar radiation, ultra-
violet radiation, and radiation levels. A description and
other photos of the capsule are given. No personalities are
mentioned, there are no references.

Unaltered Perspectives: V. Fedynsky, Doctor of Physical and
Mathematical Sciences 90

Care for Future Astronauts. D. Markov, Academician of the
Academy of Sciences USSR (Head of the Chemical and Physiological
Laboratory of the Institute of Physiology, Minsk) 91

Forerunner of Great Conquests. A. Alkhimov, Corresponding
Member of the Academy of Sciences USSR (Director of the
Physiology Institute AN Armyanskoy SSR (Physical Institute of
the Academy of Sciences Armyanskoy SSR)) 93

Telestation "Ty" in Outer Space. P. Fedorov 95

Two Flights. Leonid Sobolev 98

Beginning of a New Era. Olga Porsh 100

Meeting With the First "Astronauts." V. Salinov, V. Shirokov 102
[The author of the book is a Soviet astronaut, V. Salinov, Professor,
Institute of the Department of Astronautics, Institute
Shternberg (State Astronomical Institute named
Shternberg)] 104

Creative Genius of the Builders of Communism. Material in
Pravda 108

Solution of a Very Important Problem. V. Abrikosov, Academician 113

Enormous Success of Soviet Science and Engineering. Press
Conference in the Academy of Sciences USSR 115

Biological Program of the Spaceship. I. Shtakel, Academician 130

On the Eve of Manned Space Flight. V. Parin, Active Member of
the Academy of Medical Sciences USSR 137

Into the Depths of the Microcosmos. J. Vernoy, Corresponding
Member of the Academy of Sciences USSR; N. Gribanov, Professor 143 14

Name : FEDYNSKIY, V. V.

Title : Doctor of Physico-Mathematical Sciences.

Remarks : V. V. FEDYNSKIY is the author of an article entitled "Interplanetary Automatic /Rocket/" dealing with the third Soviet cosmic rocket.

Source : M: Stantsii v Kosmose (Stations in Outer Space), a collection of articles, published by the USSR Academy of Sciences, Moskva, 1960, with foreword by Academicians A. N. Nesmeyanov and A. V. Topchiyev, p. 337.

82 10

AUTHOR: Fedynskiy, V.V.

S/630/60/000/002/001/006
D055/D114

TITLE: Geophysical data on certain features in the structure and development of the Earth's crust

SOURCE: International Geological Congress, 21st. Copenhagen, 1960. Doklady sovetskikh geologov, problema 2: Geologicheskiye rezul'taty prikladnoy geokhimii i geofiziki. Razdel II: Geofizika. Glubinnoye stroyeniye zemli po geofizicheskim dannym, 5-13

TEXT: Research into the deep-seated structure of the Earth's crust is stated to be fundamental to discovering the laws relating to the formation and distribution of useful minerals. Geophysical methods of research are the main ones. The propagation of seismic oscillations caused by an earthquake can be used to estimate the thickness of the crust and composition of the strata composing it. Deep seismic probes are a more precise method. To judge the structure of the crust over large areas, data on bearings of seismic observations can be compared with the results of gravimetric and in some cases aeromagnetic surveys. The main theoretical questions for this and all other geological fields are: the origin of the different types of crust, the laws relating to its movement and development, and the sources of the

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Geophysical data ...

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energy necessary for the ceaseless reconstruction of the crust. Research into a reliable experimental basis for these questions is only just beginning. Geophysical investigations have established that the Earth's crust has a thickness of 5-70 km; that layers of loose sedimentary deposits and two layers usually known as the granite and basalt layers can be distinguished; and that there are three types of crust - continental, oceanic and intermediate. The connection between the deep-seated structure of the crust and the structure of the surface layers comes out clearly in detailed comparisons. In recent years, this has been done in the south-eastern part of the European USSR, with land and sea geophysical studies by seismic, gravitational and magnetic methods. The intensity of movements in the crust, even within the limits of the Russian platform, is connected with the thickness of the granite layer. The more mobile parts of the Earth's crust have a thick granite layer. Zones of large-scale gradients and bands of positive gravitational and magnetic anomalies of deep origin define the boundaries of crustal blocks which differ in structure and geological history. Zones of intensive oscillatory motions with a dominant tendency to subsidence in the early phases and elevation in the later phases of their geological history are distinguished by negative gravity anomalies. Positive gravity anomalies are observed over stable regions of the crust. There is Card 2/4

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D055/D114

important evidence in favor of the hypothesis concerning phase transformation of the sub-crustal material - which is accompanied by periodic increases in its volume and alterations in the physical state of the overlying areas of the crust- as the main cause of its oscillatory motions and probably its horizontal movements also. Variants of this hypothesis have been put forward by V.V. Belousov (ref.2: Osnovnyye voprosy geotektoniki [Basic Geotectonic Questions] . Gosgeoltekhizdat, 1954); A.A. Borisov (ref. 3: Anomalii sily tyazhesti gornyykh oblastey [Anomalies in the Force of Gravity of Mountain Regions] . " Prikl. geofiz.", vyp. 21, Gostoptekhizdat, 1958); P.N. Kropotkin (ref. 15: Proiskhozhdeniye materikov i okeanov [The Origin of Continents and Oceans] . "Priroda", no.4, 1956) and V.A. Magnitskiy (ref.18: Osnovy fiziki Zemli [Foundations of Earth Physics] , Geodezizdat, 1953). All these authors agree that differentiation of matter according to density is the leading deep-seated process. It takes place at depths of several hundred kilometers as a result of uneven radiogenic heating. The relationship between variable endogenous forces and constant gravity determines the state of the crust with respect to potential isostatic balance. The structure and history of even very large crustal blocks are determined mainly by endogenous forces, although certain extensive areas of the Earth's surface, e.g. Antarctica, are subject to an external load of predominating

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Geophysical data ...

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influence. This external load is presumably compensated for by a flow of sub-crustal matter away from the ice-cap. It may therefore be assumed that other exogenous effects can cause such compensatory processes. This question was discussed with S.V. Ushakov, an associate of Moscow University and participant in Antarctic expeditions organized by the USSR Academy of Sciences. There are 26 Soviet references.

Card 4/4

GRATSIANOVA, O.P.; FEDYNSKIY, V.V.

New geological results of retional geophysical works. Sov. geol. 3
no.3:143-148 Mr '60. (MIRA 13:11)

1. Ministerstva geologii i okhrany neдр SSSR.
(Geology)

ZOTKIN, I.T. Prinimali uchastnye: MARTYHENKO, V.V.; SIMAKINA, Ye.G.;
TERENT'YEVA, A.K.; KHOTINOK, B.L. VEDYNSKIY, V.V., otv.red.;
BERKGAUT, V.G., red.isd-va; YKIPANOVA, L., tekhn.red.

[Instructions for observing meteors] Instruktsia dlia nabliu-
denii meteorov. Moskva, Isd-vo Akad.nauk SSSR, 1961. 52 p.
(MIRA 14:4)

(Meteors)

GRUSHINSKIY, Nikolay Panteleymonovich; FEDYNSKIY, Vsevolod Vladimirovich,
prof., retsenzent; ALEKSANDROV, Sergey Yefimovich, dots., retsenzent;
NOSYREVA, I.A., red.; LAZAREVA, L.V., TEKHN. RED.

[Introduction to gravimetry and gravity prospecting] Vvedenie v
gravimetriyu i gravimetricheskuyu razvedku: Moskva, Izd-vo Mosk.
univ., 1961. 205 p. (MIRA 15:2)
(Gravity prospecting)

BR

Name : FEDYNSKIY, V.

Title : Doctor of Physical and Mathematical Sciences.

Remarks: Doctor V. FEDYNSKIY is the author of an article entitled "Danger of
Meteors in Outer Space", which is based on the experience of the
flights of Gagarin and Titov.

Source : N: Sovetskaya Belorussiya #223, 20 September 1961, p. 4, o. 2-4.

1 10

FEDYNSKIY, V.V., doktor fiziko-matem. nauk, red.; LEVINSON, V.G., kand. geol.-mineral. nauk, red.; TOPCHIEV, A.V., akad. NAGIYEV, M.F., akad., red.; SHUYKIN, N.I., red.; MIRCHINK, M.F., red.; TREBIN, F.A., doktor tekhn. nauk, red.; SANIN, P.I., doktor khim. nauk; SUKHANOV, V.P., inzh., red.; PANOV, V.V., kand. tekhn. nauk, red.; IONEL', A.G., vedushchiy red.; ZARETSKAYA, A.I., vedushchiy red.; FEDOTOVA, I.G., tekhn. red.

[Reports of the International Petroleum Congress. 5th New York, 1959]
Doklady V Mezhdunarodnogo neftianogo kongressa, New York, 1959. Moskva, Gos. nauchno-tekhn. izd-vo neft. i gorno-toplivnoi lit-ry. Vol.1. [Geology and geophysics] Geologiya i geofizika. Pod red. V.V. Fedynskogo i V.G.Levinsona. 1961. 382 p. (MIRA 14:9)

1. International Petroleum Congress. 5th, New York, 1959. 2. AN Azerbaydzhanskoy SSR (for Nagiyev). 3. Chleny-korrespondenty AN SSSR (for Shuykin, Mirchink).
(Petroleum geology) (Gas, Natural—Geology)
(Prospecting—Geophysical methods)

DEMENITSKAYA, Raisa Mikhaylovna; FEDYNSKIY, V.V., doktor fiz.-matem.nauk, nauchnyy red.; REYKHERT, L.A., vedushchiy red.; SEGAL', Z.G., vedushchiy red.; GENNAD'YEVA, I.M., tekhn.red.

[Basic characteristics of the crustal structure based on geophysical data] Osnovnye cherty stroeniya kory zemli po geofizicheskim dannym. Leningrad, Gos. nauchn.-tekhn. izd-vo. neft. i gorno-toplivnoi lit-ry. Leningr. otd-nie. 1961. 221 p. (Leningrad. Nauchno-issledovatel'skii institut geologii arktiki. Trudy, vol.115).

(Earth--Surface)

FEDYNSKIY, V.V., red.; DAKHNOV, V.N., red.; VASIL'YEV, V.G., red.; KALENOV, Ye.N., red.; KOMAROV, S.G., doktor tekhn. nauk, red.; POLSHKOV, M.K., red.; RYABINKIN, L.A., red.; PERSHINA, Ye.G., vedushchiy red.; MUKHINA, E.A., tekhn. red.

[Manual for geophysicists in four volumes] Spravochnik geofizika v chetyrekh tomakh. Moskva, Gos. nauchno-tekhn. izd-vo neft. i gornotoplivnoi lit-ry. Vol.2. [Geophysical methods of well logging] Geofizicheskie metody issledovaniia skvazhin. Pod red. S.G.Komarova. 1961. 760 p. (MIRA 14:11)

(Oil well logging)

FEDYNSKIY, V.V.

S/169/62/000/005/016/093
D228/D307

AUTHORS: Godin, Yu. N., Polshkov, M. K., Ryabinkin, L. A., Fedynskiy, V. V. and Fotiadi, E. E.

TITLE: Development of geophysical methods of prospecting for oil and gas in the USSR

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 5, 1962, 23-24, abstract 5A181 (V sb. 5-y Mezhdunar. neft. kongress, v. I, M., Gostoptekhizdat, 1961, 237-256)

TEXT: A report is given about the extent of geophysical operations and about the geographic disposition of geophysical parties on USSR territory. The main achievements in the procedure and the technique of geophysical investigations are considered. These include the development of: A magnetometer, based on the principle of free nuclear induction; a quartz gravimeter with increased damping; a gradiometer; the procedure and the apparatus of the telluric content and magnetotelluric measurement methods; portable seismic stations; fluvial seismic prospecting; marine seismic prospecting, in which

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Development of geophysical ...

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the recording of explosions is made on the vessel's course; the method and the equipment of controllably directed reception; complex regional geophysical investigations, etc. It is emphasized that the seismic reflection method remains the main geophysical method of seeking local structures in sedimentary strata in all regions of the Soviet Union. Examples of the successful application of geophysical methods are quoted. / Abstracter's note: Complete translation. 7

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S/035/62/000/003/039/053
A001/A101

AUTHOR: Pedynskiy, V. V.

TITLE: Tasks of marine gravimetric expeditions of MGU (1954-1958)

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 3, 1962, 30,
abstract 3G212 (V sb. "Morsk. gravimetr. issledovaniya", no. 1,
Moscow, Mosk. un-t, 1961, 3-7)


TEXT: The author considers scientific and practical importance of marine gravimetric investigations for solving the problems of determining parameters of the normal formula for gravity, studying the shape of geoid, determining the thickness and depth structure of Earth's crust, accomplishing a gravimetric connection between the continents of Europe and Antarctic. The results of studies conducted in this direction by a team of scientific workers, lecturers, post-graduate students and students of MGU senior courses during 1954 - 1958 are characterized and evaluated. In the collection of articles dealing with these studies (cf. 3G234 K) the methods and conditions of conducting gravimetric work are systematically laid down; this became possible after completion of processing and evaluation of materials of the studies. It is shown that even imperfect



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Tasks of marine gravimetric expedition ...

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gravimetric determinations, performed with a root-mean-square error of $\pm 10 - 15$ mgal at points distributed sparsely and non-uniformly in the World Ocean and regions of southern hemisphere adjoining the Antarctic, can be successfully utilized for solution of certain problems, if the results are used with due care. The author describes the development of marine gravimetric investigations of MGU begun in 1930. 

P. Shokin

[Abstracter's note: Complete translation]

Card 2/2

S/030/61/000/009/007/013
B105/B101

AUTHOR: Fedynskiy, V. V., Doctor of Physics and Mathematics
TITLE: Plenary Meeting of the Commission on Comets and Meteors
PERIODICAL: Akademiya nauk SSSR. Vestnik, no. 9, 1961, 117-118

TEXT: The Komissiya po kometam i meteoram Astronomicheskogo soveta Akademii nauk SSSR (Commission on Comets and Meteors of the Astronomical Council of the Academy of Sciences USSR) coordinates most of the research work in this field. Its plenary meetings are held every two or three years. The ninth took place at Stalinabad from May 16 to 20, 1961 following an invitation of the Akademiya nauk Tadzhikskoy SSR (Academy of Sciences of the Tadzhikskaya SSR). 46 scientific reports included surveys of progress made by meteor and comet astronomy in 1958 - 1960, comet physics, the mechanical theory of comet shapes, meteor studies using rockets and artificial satellites, results of meteor research during the International Geophysical Year, the further evaluation of data obtained, investigation of the upper strata of the atmosphere, methods

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Plenary Meeting of the Commission ...

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applied in radar, photography and spectroscopic observations of meteors, as well as organizational problems. Changes in the density of meteoric matter in the terrestrial orbit and its structure in the solar system were studied by radar, photographic, and visual methods at Kazan', Khar'kov, Stalinabad, Jimferopol', and other centers. Z. Cepiecha, delegate of the Observatory of the Czechoslovakian Academy of Sciences at Ondrejov, demonstrated the spectra of two meteors. The Plenary Meeting agreed upon the necessity of systematic observations of comets and studies of comet astronomy (nature and characteristics of corpuscular streams, local magnetic fields, and the magnetic field of the solar system). In a review of important results achieved by scientific institutions, the work done by the Institut astrofiziki Akademii nauk Tadzhikskoy SSR (Institute of Astrophysics of the Academy of Sciences of the Tadzhikskaya SSR) received a special mention for progress made in the study of meteors and comets in 1958-1960 using chiefly the photographic method. Observations of meteors are also to be organized in the course of the International Year of the Quiet Sun from April 1, 1964 to December 31, 1965. Staff training in meteor and comet astronomy is to be improved. The attendants to the

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Plenary Meeting of the Commission ...

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Plenary Meeting inspected the Institute, its meteoric observation station at Gissar, and the astroclimatic station at Khodzha-Obi-Garm.

Card 3/3

BELYAYEVSKIY, N.A.; FEDYNSKIY, V.V.

Study of deep-lying mineral resources and problems of extra-deep drilling. Sov.geol. 4 no.12:55-77 D '61. (MIRA 15:2)

1. Ministerstvo geologii i okhrany nedr SSSR.
(Earth—Internal structure)

FEDYNSKIY, V.V.

Ninth Plenum of the Committee on Comets and Meteors of the Astronomical Council of the Academy of Sciences of the U.S.S.R. Astron.zhur.
38 no.6:1133-1136 N-D '61. (MIRA 14:11)
(Comets) (Meteors)

VOLODARSKIY, R.F.; ANONOV, V.I.; D'YAKONOV, Ye.G.; SHIRIKOV, V.P.;
FEDYNSKIY, V.V., doktor fiz.-mat. nauk, prof., red.;
ZARETSKAYA, A.I., ved. red.; BASIMAKOV, G.M., tekhn. red.

[Use of electronic calculating machines to interpret gravity
and magnetic fields]Primenenie elektronno-schetnykh mashin dlia
interpretatsii gravitatsionnykh i magnitnykh polei. Pod red.
V.V.Fedynskogo. Moskva, Gostoptekhizdat, 1962. 74 p.
(MIRA 15:9)

(Electronic calculating machines) (Gravity)
(Magnetic anomalies)

MARTYNOV, D.Ya., prof., otv. red.; DURNEV, A.I., red.; IZOTOV, A.A., red.;
POPOV, P.I., red.; FEDYNSKIY, V.V., red.; BRONSHTEN, V.A., red.;
RAKHLIN, I.Ye., red. izd-va; LAUT, V.G., tekhn. red.

[Transactions of the Congress of the All-Union Astronomical and
Geodetic Society] Trudy tret'yego s"ezda Vsesoyuznogo
astronomo-geodezicheskogo obshchestva. Moskva, Izd-vo Akad.
nauk SSSR, 1962. 257 p. (MIRA 15:2)

1. S"yezd Vsesoyuznogo astronomo-geodezicheskogo obshchestva, 3rd,
Kiev, 1960. 2. Prezident Vsesoyuznogo astronomo-geodezicheskogo
obshchestva (for Martynov).

(Astronomy—Congresses) (Geodesy—Congresses)

8/030/62/000/006/006/007
1023/1223

AUTHOR: Fadynskiy, V.V., Doctor of Physico-Mathematical Sciences and
Riznichenko, Yu. B., Corresponding member of the Academy of
Sciences USSR

TITLE: Research on the Earth's Crust

PERIODICAL: Akademiya nauk, Vestnik, no. 6, 1962, 86-89

TEXT: A conference of the International Union of Geodesy and Geophysics took place in Paris on 19-22 of March. Problems of the structure of the Earth crust were discussed and geological, geophysical, geochemical and oceanographic data were presented. The most important geophysical method discussed was seismology, after it gravimetry and afterwards other methods. The American methods of observations of volume waves from explosions are similar to the methods developed in USSR. The Americans follow the method of deep seismic sounding, suggested by academician G.A. Gumburtsev more than 10 years ago, but their work lags both in quality and quantity. I.P. Kosminskaya gave a talk on the problem of deep seismic boundaries. I.V. Pomerantsevaya presented data on the propagation velocities of longitudinal waves in different rocks. Data

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Research on...

S/030/62/000/006/006/007
I023/I223

collected during the International Geophysical Year in the region between the Pacific and the Asiatic continent were presented: Ye. I. Gal'perin - deep seismic soundings and O.N. Salov'yeva - aeromagnetic investigations. The problem of the reduction of the gravity force was discussed by participants from several countries. V.V. Fedynskiy reported on the Soviet deep-drilling project. The conference decided to recommend the definition of different layers by their propagation velocity of longitudinal waves. The suggestions of Yu. Ryznichenko (USSR) concerning seismological investigations on supported profiles and of D.P. Vullard (USA) concerning a new value of density (2.8 g/cm^3) for reduction of gravimetric measurements will be discussed at the sessions of the Association of seismology.

Card 2/2

RIZNICHENKO, Yu.V.; FEDYNSKIY, V.V.

Conference of the work group on the earth's crust, held in Paris
on March 19-22, 1962. Izv. AN SSSR. Ser. geofiz. no.7:990-992
Jl '62. (MIRA 15:7)

(Earth--Surface)

FEDYNSKIY, V.V.

Classification of gravimetric operations and new technical
instructions for gravity prospecting. Geofiz. razved. no.8:51-56
'62. (MIRA 15:7)

(Gravity prospecting)

BELIAEVSKI, N.A. [Belyayevskiy, N.A.]; FEDINSKI, V.V. [Fedynskiy, V.V.]

Studies on the depth of earth subsurface and problems of high-
depth boring. *Analele geol geogr* 16 no.2:3-25 Ap-Je 62.

KOMAROV, S.G., POLSHKOV, M.K., RYABINKIN, L.A., SERGETEV, L.A., FEDINSKIY, V.V. 5

"Progress in geophysical methods of prospecting for oil and gas."

Abstract. The paper outlines the results of the development of geophysical prospecting in the USSR for the past three years. A short description is given of the instruments and technique applied in seismic, electrical, gravity, magnetic and logging surveys both in prospecting and exploration of structures and in investigations of direct prospecting for oil and gas fields.

Illustrations are supplemented showing geological results of application of up-to-date methods and instruments of geophysical investigations.

The paper shows great significance of geophysical investigations in studies of geological structure of regions and in prospecting for oil and gas fields in the USSR.

reprint to be submitted for the 6th World Petroleum Congress, Frankfurt, West Germany, 19-26 June 1963.

SIMONENKO, Alla Nikolayevna; FEDYNSKIY, V.V., doktor fiziko-matem. nauk,
otv. red.; BRONSHTEN, V.A., red.izd-va; ASTAF'YEVA, G.A.,
tekhn. red.

[Treatment of meteor photographs] Obrabotka fotografii meteorov.
Moskva, Izd-vo Akad. nauk SSSR, 1963. 38 p. (MIRA 16:2)
(Meteors) (Astronomical photography)

USHAKOV, Sergey Aleksandrovich; FEDYNSKIY, V.V., doktor fiz.-mat. nauk, otv. red.; ISAKOVICH, T.D., red.; UL'YANOVA, O.G., tekhn. red.; DOROKHINA, I.N., tekhn. red.

[Collection of articles of the Intergovernmental Committee for the Execution of the International Geophysical Year] Sbornik statei Mezhdunarodnogo geofizicheskogo goda. Moskva, Izd-vo AN SSSR. No.4. [Geophysical studies of the crustal structure in the eastern Antarctica] Geofizicheskie issledovaniia stroeniia zemnoi kory v Vostochnoi Antarktide. 1963. 91 p.

(MIRA 17:2)

1. Akademiya nauk SSSR. Mezhdunarodnyy komitet po provedeniyu Mezhdunarodnogo geofizicheskogo goda. XIII razdel programmy MGG. Gravimetriia.

BABADZHANOV, Pulat Babadzhanovich; KRAMER, Yefim Naumovich;
FEDYNSKIY, V.V., doktor fiz.-matem. nauk, otv. red.;
VERSTAK, G.V., red.; GUS'KOVA, O.M., tekhn. red.

[Collection of articles of the Intergovernmental Committee
for the Execution of the International Geophysical Year]
Sbornik statei Mezhdudomstvennogo komiteta po provedeniiu
Mezhdunarodnogo geofizicheskogo goda. Moskva, Izd-vo AN SSSR.
No.12[Methods and some results of photographic studies of
meteors] Metody i nekotorye rezul'taty fotograficheskikh is-
sledovaniy meteorov. 1963. 140 p. (MIRA 17:2)

1. Akademiya nauk SSSR. Mezhdudomstvennyy komitet po pro-
vedeniyu Mezhdunarodnogo geofizicheskogo goda. V razdel prog-
rammy MGG. Ionosfera i meteory.

FEDYNSKIY, V.V.

G.A. Gamburtsev's role in the development of geophysical methods in the study of the earth's crust; on the 60th anniversary of his birth. Izv. AN SSSR Ser. geofiz. no.5:661-669 My '63. (MIRA 16:6)

(Gamburtsev, Grigorii Aleksandrovich, 1903-1955)

ASTASOVICH, I.S.; FEDYNSKIY, V.V.

Achievements of the meteor astronomy in 1958-1961. Meteoritika
no.23:91-100 '63. (MIRA 16:9)
(Meteors)

BELYAYEVSKIY, N.A.; FEDYNSKIY, V.V.

Deep-hole drilling as a method for studying the earth's crust.
Izv. AN SSSR.Ser.geol.. 28 no.5:3-8 My '63. (MIRA 17:4)

BELYAYEVSKIY, N.A.; FEDYNSKIY, V.V.

Deep drilling. Priroda 52 no.3:108-109 '63.

(MIRA 16:4)

1. Ministerstvo geologii i okhrany neдр SSSR.
(Geological research)

FEDYNSKIY, V.V., doktor fiz.-matem. nauk, prof., otv. red.; BALLAKH,
I.Ya., red.; PIOTROVSKIY, V.V., kand. geogr. nauk, red.;
TARANOV, N.I., red.; CHIZHEVSKIY, A.L., prof., red.; KUMKES,
S.N., red.; CHERNYKH, M.P., mlad. red.

[Earth in the universe] Zemlia vo vselennoi. Moskva, Izd-
vo "Mysl'," 1964. 490 p. (MIRA 17:10)

FEDYNSKIY, Vsevolod Vladimirovich; PERSHINA, Ye.G., ved. red.

[Geophysical prospecting; geophysical methods of studying the earth's crust, exploring and prospecting for minerals] Razvedochnaia geofizika; geofizicheskie metody issledovaniia zemnoi kory, poisk-v i razvedki poleznykh iskopaemykh. Moskva, Nedra, 1964. 672 p.
(MIRA 18:1)

ACCESSION NR: AT5002744

S76000764 (U.S. PATENT OFFICE)

AUTHOR: Fedoskiy, V. V. (Doctor of physico-mathematical sciences, Professor)

TITLE: Some of the complex problems in the sciences of the Earth and space

1. Zemlja vo Vseleynoy (The Earth in the Universe). Moscow, 1974. 150 p. 110,000.

TOPICS: geology, geophysics, geochemistry, cosmology, cosmic ray, cosmic matter, Earth crust, upper mantle, lunar surface, Mars, Venus, planetary fracture, geomagnetic field, etc.

ABSTRACT: This study deals with the accretion of meteoric substances and cosmic dust on the Earth's surface, abyssal fractures within its crust and the changing geomagnetic field. Samples of cosmic dust and other substances settling on the Earth at a daily rate of 13,000-80,000 metric tons (about 10,000 metric tons a year) were taken by high-flying jet planes, space balloons, and artificial satellites. The thickness of the earth's crust is said to vary from 5 to 75 kilometers, and its changing configuration is due to abyssal fractures and the contact with the upper mantle. Even the formations on the lunar surface are similar to those produced on the Earth by abyssal fractures. The geomagnetic field changes

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1. 25050-65

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its polarity every several tens of thousands of years, and the magnetic poles
on Earth's surface in the course of geological time.

Card 2/2

KOVALEVA, A.A.; FEDYNORiy, V.V.

Problems of oil and gas prospecting; Fifth All-Union Scientific
and Technical Geophysical Conference. Geol. nefti. 1 gaza 8
no.3:51-55 Mr '64. (MIRA 17:6)

1. Gosudarstvennyy geologicheskay komitet SSSR.

FEDYNSKIY, V.V., otv. red.; POLSHKOV, M.K., zam. otv. red.;
BORISOV, A.A., red.; NEVOLIN, N.V., red.; KROBATKO,
I.I., red.; FEDORENKO, A.N., red.

[Geological results of applied geophysics] Geologicheskie rezul'taty prikladnoi geofiziki. Moskva, Nedra, 1965. 292 p. (Mezhdunarodnyi geologicheskii kongress. Doklady sovetskikh geologov. Problema 2)

(MIRA 18:5)

1. Natsional'nyy komitet geologov Sovetskogo Soyuza.

KASHCHEYEV, V.L.; TSESEVICH, V.P.; FEDYNSKIY, V.V., doktor fiz.-
matem. nauk, otv. red.; ZHITNIKOVA, S.A., red.

[Study of atmospheric circulation in the meteor zone] Is-
sledovanie tsirkulatsii atmosfery v meteornoj zone. Mo-
skva, Nauka, 1965. 63 p. (MIRA 18:4)

1. Politekhnicheskiy institut im. V.I.Lenina, Khar'kov (for
Kashcheyev). 2. Astronomicheskaya observatoriya Gosudarstven-
nogo universiteta im. V.I.Mechnikova, Odessa (for TSesevich).

(N)

SOURCE CODE: UN/0000/67/000, UN/0000/0000

: ORG: none

SOURCE: International Geological Congress. 22d, New Delhi, 1964. Geologicheskkiye rezultaty prikladnoy geofiziki (Geological results of applied geophysics); doklady sovetskikh geologov, problema 2. Moscow, Izd-vo Nedra, 1965, 124-141

ABSTRACT: Marine geophysical exploration has been conducted in the Soviet Union for the purpose of investigating the crustal structure, and regional geological investigations have been made in offshore areas which are potential oil- and gas-bearing structures. The seismic method is the most effective and most often used for offshore investigations. Also successful are gravimetric, magnetic, and electric prospecting methods. The technique of offshore seismic shooting has been greatly improved, making it possible to operate from a moving ship. The geophysical investigations conducted on the Caspian Sea made it possible to distinguish the areas of

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ACC NR: AT6028378

the Pre-Cambrian Epihercynian platform and the Alpine geosyncline. Investigations have been made of the regional structure of the south Caspian depression, oil-bearing regions of its folded margins, and gentle structures of the internal depression. The area of the Epihercynian platform has been found to contain Kara-Bugaz and middle Caspian arches and offshore continuation of the South Mangishlack depression as well as folded zones. The continuations of the South Mangishlack and Karpinsky ridge, the north Caspian zone of marginal uplifts of the Pre-Cambrian platform and the offshore continuation of the Pre-Caspian depression have been thoroughly investigated. A number of structures in the southern part of the Caspian Sea have been prepared for deep drilling. At the Sea of Azov a step-like submergence of the southern slope of the Pre-Cambrian platform has been established, and the Azov rampart, which connects the Epihercynian folded structures of the Northern Caucasus and Crimean steppes has been located. Offshore continuations of the Kerch-Taman dislocations have been studied. At the Black Sea geophysicists have studied the hidden Cretaceous folding and deep-seated faults at the offshore continuation of the Kolkhida depression, submergence of the northwestern Caucasus, buried highs south of the Crimea and the jointing between the Crimean and Dobrudga dislocations. Also the structure of the crust and the structure of the sedimentary strata in the deep-sea areas have been studied. Seismic surveys have been conducted to study the geology of the Paleozoic deposits and the surface of the basement in the eastern Baltic Sea. It has been established that the thickness of the sediments within the offshore continuation of the Polish-Lithuanian syncline does not exceed 3 km. Interesting results have been obtained from geophysical investigations conducted at

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ACC NR: AT6020378

the Kara Sea near the mouths of the Ob and Yenisey Rivers. The regional structure of the Jamal-Taimyr depression and the Taimyr foredeep has been defined, major platform structures have been located in the Mesozoic strata, and the Taimyr has been followed further out into the sea. Deep-seated structure of the Earth's crust has been investigated in the transitional zone between the Asian continent and the Pacific Ocean, and also at the Okhotsk Sea and in the area of the Kamchatka-Kurile ridge. It has been found that the Sakhalin Tertiary folding area extends under the waters of the Okhotsk Sea. Marine geophysical exploration in the USSR will be expanded. Orig. art. has: 7 figures.

SUB CODE: 08/ SUBM DATE: 06Jan65/ ORIG REF: 048

Card 3/3

FEDYSHIN, N.P.

New standard for the air drying of conifer lumber. Der. prom.
12 no.12:23-24 D '63. (MIRA 17:3)

KOPERIN, Fedor Ivanovich, prof.; FEDYSHIN, Nikolay Pavlovich,
st. prepod; NAUMOVA, I.A., red.

[Preparation of lumber for export] Podgotovka pilomaterialov
na eksport. Arkhangel'sk, Severo-Zapadnoe knizhnoe izd-vo,
1965. 122 p. (MIRA 18:10)

1. Arkhangel'skiy lesotekhnicheskii institut imeni V.V.
Kuybysheva (for Fedyshin).

FEDYSHIN, P. S.

FEDYSHIN, P. S. "The Nature of the Specific Dynamic Effect of Proteins and Its Significance in Certain Diseases of the Internal Organs." Kiev Order of Labor Red Banner Medical Institute Academician A. A. Bogomolets. Kiev, 1956. (Dissertation for the Degree of Candidate in Medical Science)

So: Knizhnaya Letopis', No. 19, 1956.

COUNTRY : USSR
 CATEGORY : Human and Animal Physiology, Metabolism
 ARG. JOUR. : RZhBiol., No. 5 1959, No. 21726
 AUTHOR : Fedyshin, P.S.
 INST. :
 TITLE : The Role of Conditioned-reflex Factors in the Specific Dynamic Action of Proteins.
 ORIG. PUB. : Fiziol. zh., 1958, 4, No. 3, 348--355

ABSTRACT : The gas exchange of healthy fasting subjects was determined before they were given a test meal (200 gm of roasted meat), and the determinations continued for 2½ hours after the meal at 30-minute intervals. In this way the specific dynamic action of protein was clearly demonstrated. On the following day the gas exchange of the subjects was again determined, after which a meal was set before them, while the measurement of gas exchange continued as on the preceding day. In the majority of the subjects a conditioned-reflex rise in

1. Kiivs'kiy institut udoskonallennya likariv, kafedra terapii I.
 (CONDITIONED RESPONSE)
 (PROTEIN METABOLISM)

COUNTRY : USSR
CATEGORY :

T

ABS. JOUR. : RZMBLcl., No. 5 1959, No. 21726

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : gas exchange was noted, although it was somewhat weaker and less prolonged than after ingestion of the meal. After three combinations of the conditioned and unconditioned stimulus, the conditioned-reflex rise in gas exchange was more distinct.--V.I. Rozengart

Card: 2/2

FEDYSHIN, P.S.

Rare case of agranulocytosis. Vrach.delo no.7:733-735 J1'58
(MIRA 11:9)
1. Kafedra terapii I (zav.- prof. D.F. Chebotarev) Kiyevskogo
instituta usovershenstvovaniya vrachey.
(AGRANULOCYTOSIS)

FEDYSHIN, P.S.

External respiration and basal metabolism in patients with inflammation and suppuration of the lungs treated with antibiotic aerosols. Vrach.delo no.2:139-141 F '59.

(MIRA 12:6)

1. Kafedra terapii (zav.kafedroy - prof.D.F.Chebotarev)

Kiyevskogo instituta usovershenstvovaniya vrachey.

(RESPIRATION)

(METABOLISM)

(LUNGS--ABSCESS)

(AEROSOLS--THERAPEUTIC USE)

FEDYSHIN, P.S., kand.med.nauk (Kiyev, ul.Ovruchskaya, d.15, kv.1)

Treatment of the chlorohydropenic syndrome (gastric tetany).
Nov. khir. arkh. no.2:43-47 Mr-Apr '60. (MIRA 14:11)

1. Kafedra terapii I (zav. - prof. D.F.Chebotarev) Kiyevskogo
instituta usovershenstvovaniya vrachey.
(TETANY)

FEDYSHIN, P.S., kand.med.nauk

Diagnosis of choreohyporenic syndrome. Vrach.delo no.2:121-
125 F '60. (MIRA 13:6)

1. Klinika terapii I (sav. - prof. D.F. Chebotarev) Kiyevskogo
instituta usovershenstvovaniya vrachey.
(CHLORIDES IN THE BODY)

FEDYSHIN, P.S., dotsent; KORKUSHKO, O.V.

Rare cases of full auriculoventricular block with rhythm migrations in the ventricles and frequent attacks of the Adams-Morgagni-Stokes syndrome. Vrach. delo no.12:137-139 D '61. (MIRA 15:1)

1. Kafedra terapii I (zaveduyushchiy - chlen-korrespondent AMN SSSR, prof. D.F.Chebotarev) Kiyevskogo instituta usovershenstvovaniya vrachey.

(HEART BLOCK)

(ARRHYTHMIA)

FEDYSHIN, P.S., dotsent

Status of external respiration in patients with inflammatory
suppurative diseases of the lungs under the influence of
antibiotic aerosol treatment. Klin.khir. no.11:28-31 N '62.
(MIRA 16:2)

1. Kafedra terapii I (zav. - prof. D.F. Chebotarev) Kiyevskogo
instituta usovershenstvovaniya vrachey.

(RESPIRATION) (LUNGS--ABSCESS) (AEROSOL THERAPY)

KORKUSHKO, O.V., kand.med.nauk; FEDYSHIN, P.S., dotsent; RADZIVIL, V.F.,
kand.med.nauk

Chronic corpulmonale syndrome in older and aged persons. Vrach.
delo no.12:38-43 D '62. (MIRA 15:12)

1. Otdeleniye vozrastnykh izmeneniy vnutrennikh organov Instituta
gerontologii i eksperimental'noy patologii AMN SSSR (zav. -
chlen-korrespondent AMN SSSR, prof. D.F.Chebotarev) i kafedra
terapii I Kiyevskogo instituta usovershenstvovaniya vrachey.
(COR PULMONALE) (GERIATRICS)

FEDYSIOW, Helena

Mosaic screens for color television made by means of ultraviolet
hardening of photosensitive synthetic resins. Przegl elektroniki
3 no.7:383-385 J1 '62.

1. Przemyslowy Instytut Elektroniki, Warszawa.

2WA-50

L 05132-67 EWT(1) JK

ACC NR: AP6032092

SOURCE CODE: UR/0438/66/028/005/0049/0054

19
B

AUTHOR: Fedyuk, E. O. -- Fedyuk, Ye. A.; Reznik, S. R.; Cherepenko, O. Y. --
Cherepenko, Ye. I.; Nosach, L. M. -- Nosach, L. N.

ORG: Institute of Microbiology and Virology AN URSR (Institut mikrobiolohiyi i virusolohiyi AN URSR)

TITLE: Effect of deoxyribonuclease on rabies virus

SOURCE: Mikrobiolohichnyy zhurnal, v. 28, no. 5, 1966, 49-54

TOPIC TAGS: virus, virus disease, rabies virus, deoxyribonuclease

ABSTRACT: The effect of deoxyribonuclease on fixed rabies virus was studied. A mixture of the enzyme with the virus was injected into the brain of albino mice weighing 8 to 10 g. Deoxyribonuclease greatly reduces the infectious titre of the virus, its inactivating effect being directly proportional to its concentration. Intracerebral administration of DNAse solutions to mice somewhat reduces the percentage of lethality. Orig. art. has: 4 tables. [Based on authors' abstract] [KS]

[W.A. 50]

SUB CODE: 06/ SUBM DATE: 05Aug65/ ORIG REF: 008/ OTH REF: 007/

Card 1/1

TUTORSKIY, I.A.; MARKOV, V.V.; FEDYUK, O.I.; VITSMUDEL', M.B.; DOGADKIN, B.A.

Kinetics of the cyclization of natural and synthetic polysoprenes induced by phosphorus pentoxide. Vysokom. soed. 7 no.6:953-957 Je '65. (MIRA 18:9)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M.V.Lomonosova.

AUTHORS: Krasulin, V.S., and Fedyuk, V.I. 132-11-7/7

TITLE: 40 Years of Soviet Prospecting Geophysics (Sorok let sovetskoy razvedochnoy geofiziki)

PERIODICAL: Razvedka i okhrana nedr, 1957, No 11, pp 50-62 (USSR)

ABSTRACT: Geophysical prospecting methods were first applied by the Special Committee for the Study of the Kursk Magnetic Anomalies (Osobaya komissiya po izucheniyu Kurskikh magnitnykh anomalii-OKKMA) during 1919-1927. During subsequent years the methods of induction, electric coring and magnetism were perfected for prospecting minerals, oil deposits and water resources. The method of aeromagnetic surveying aided in discovering deposits located in areas of poor accessibility. Perfection of the aeromagnetometer "A3M-49" by a group of specialists under the supervision of G.S. Smirnov enabled to establish the crystalline structure of areas covered by thick sediments, the contours of basic geologic formations, tectonic changes besides locating mineral, oil, and gas deposits. More than half of the territory of the USSR has been surveyed with this instrument at the present time. Gravimetric surveying started in 1932, was conducted by uniform methods and according to a uniform government plan. Up to 1939, foreign made gravimeters were

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40 Years of Soviet Prospecting Geophysics

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used in the USSR. During subsequent years, the following gravimeters were constructed: "ГКП-2", "ГКПМ-3", "ГКМ-5" "CH-3", "ГКА", "ГКОМ" and "ГAK-3M". Parallel with gravimetric surveying on the surface, were conducted studies of gravity on the bottom of water reservoirs. Used were the gravimeters "ДГМ", "ДГА", the automatic altimeters "BA-48" and "ГВ-52", the bottom gravimeters "ДГПЕ" and adapted gravimeters "ГAK-3M". This method aided essentially in surveying the Kursk Magnetic Anomaly, the Krivoy Rog iron ore rayon, the chromium deposits of the Ural, the Volga-Ural and Ural-Emba oil districts, the depressions of the Bashkir Ural region, south-eastern Caucasus, Azerbaydzhan, and the Dnepro-Donets basin, several districts of the Turkmen SSR, and other areas. In connection with the exploration of northern permafrost areas, the ondometric device "ПА-6" was constructed by A.A. Petrovskiy and V.V. Alekseyev. Operating on direct current, the potentiometer "ЭП-1" was manufactured in series since 1934. In 1935, seismometers were used for prospecting for oil deposits on a large scale. Construction of multi-channel seismic stations was started in 1947, and seismography became one of the most important methods of geophysical prospecting operations. At present, domestic industry manufactures 26-

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40 Years of Soviet Prospecting Geophysics

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channel seismic stations "CC-26-51-Д" , 60-channel seismic stations "CC-60" and small seized instruments "CC-30/60-56" Soviet industry met the requirements of seismic expeditions by manufacturing seismographs of the types "СП-16" and "СП-16М". The radiometric method gained great importance in the USSR for geophysical purposes. The latest types ("ACFM-25", "ACFM-38" were issued in conjunction with the aeromagnetometer "AM-11" by which the geologic efficiency of each instrument was increased. Beginning in 1939, a group of specialists under the supervision of G.A. Gamburtsev applied the correlation method of refracted waves ("KMPB"), which method was further developed to the method of deflected waves, which remained the basic method for prospecting for oil deposits, and establishing the complex structures of the earth. With the aid of this method, the Buzovninskaya deposit on the Apsheron peninsula was discovered in 1940, and further important results were obtained on southern Emba, which lead to discoveries at Narmundanak, southern Koshkar, Tentyaksor and other deposits. Parallel with core sampling by electric means were developed other methods of examining drill holes, such as resistivometry, inclinometry, cavernometry, inclinometry. From the semi-automatic stations "PKC-2000" and "PKC-1200" were developed

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40 Years of Soviet Prospecting Geophysics:

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the automatic stations "A3KC-52" and "OKC-52" with electronic electronic potentiometers "ПАСК" or with photorecorders "ФР-4". In 1948, gas sampling by electric means was widely applied with the aid of the semi automatic station of the type "ГКС", and lately with the automatic gas sampling station "АГКС-56" combined with the chromatic gas analyzer "ГСТ-2". Research is conducted at the present time to improve the method of core sampling by magnetic means ("M-10"). During the past years radioactive gamma core sampling has been developed, together with several new modifications, such as neutronic core sampling, gamma-gamma core sampling, by the activation and isotope methods. The Soviet industry has developed up-to-date devices for radioactive core sampling ("A3KC-7-55"). Of special importance are methods of complex geologic-geophysical research, developed by Soviet geophysicists, applicable for separate regions and industrial districts. Examples of complex prospecting are the Kursk Magnetic Anomaly and the Turgayskaya depression. An eastern geophysical expedition has successfully applied aeromagnetic, surface-magnetic and gravimetric methods at prospecting for diamonds in kimberlite layers in the Yakutsk ASSR. Switching to a 1:50,000 scale at aeromagnetic surveying in connection with limited surface

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40 Years of Soviet Prospecting Geophysics

magnetic surveying resulted in the discovery of numerous iron ore deposits. Rational application of electric prospecting for solving of hydro-geologic problems is of great importance. As to the future, Soviet scientists are facing the task to further develop the physico-mathematical basis of research as well as further develop the methods of interpreting the results of geophysical surveying. Soviet geophysicists and designers have constructed new types of geophysical devices, among which are automatic electronic compensators "ЭАК-2" electronic needle compensators "ЭСК-1" electronic computing compensators "КСП-2" and numerous other instruments for geophysical prospecting.

ASSOCIATION: Ministry of Geology and Conservation of Natural Resources of the USSR
(Ministerstvo geologii i okhrany nedr SSSR)

AVAILABLE: Library of Congress

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